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REMARKS/ARGUMENTS

First, Applicant gratefully acknowledges the indication of allowability of the subject matter of claims 84, 30, 70, 80, 81, 85, 108, 109, and 86-88, and the allowance of claims 89-98 and 102.

Applicant has considered the Examiner's objections / rejection of the remaining claims based on the prior art and under section 35 USC 112. Subject to the following comments, Applicant respectfully disagrees with aspects of the Examiner's assessment of patentability in view of the prior art. However, to advance prosecution of this application, certain claim amendments have been made in the claims now presented herein.

First, Applicant notes that claim 62 has been cancelled.

Claims 81, 84, 86 and 99 have been amended to address the objections raised under 35 USC 112.

New claims 110-132 are presented for consideration by the Examiner.

With respect to aspects of the invention that the Applicant has conceived, and as recited in several of the independent claims that are now pending, Applicant refers initially to the following portions of the application as originally filed:

- paragraph [0088]:

"Connectors 134 and 234 when tightened by pushing or rotating them on rods 344, slightly compress the material of panels 117 and 114, resulting in the formation of a relatively rigid and geometrically stable unit where

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panels 117 and 114 are held in a relatively rigid position relative to the spacers 330".

- paragraph [0074]:

"The overall result of connecting panels 114, 117 of each panel unit to the several spacers 130 associated therewith, with a plurality of connectors 134, 234, is that the panel units 112 can be formed as a substantially rigid geometrically stable structure capable of being easily moved and arranged in a formwork system to assist in producing a reinforced concrete wall."

As disclosed, two qualities can be achieved by aspects of the invention: (1) a relatively rigid panel unit and (2) a geometrically stable panel unit.

Applicant has recognized that this can be achieved in a panel unit using panel members made from foamed plastic by the combination of two features: (1) compression of the foamed plastic material of a panel member and (2) strengthening of the foamed plastic panel member.

It is known that compression of a compressible material results in thinning or narrowing of the material in the area proximate the compression. Thus, there is a change in the geometry of the material that is compressed. In the present context, compression of an un-strengthened foamed plastic panel member would cause the surface of the foam panel member to become uneven. If the panel member that is compressed is to be removed after the concrete is formed, the result is that the open surface of the concrete formed by that panel member will be uneven even after slight compression and removal of that panel member.

By way of example, and with reference to Figure 8, material compression of the panel member 117 occurs when the surface of the connector flange 135 of connector 134

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facing the outer surface 117a of the panel member is in abutment with this surface during the tightening of the connector on the end of the rod member 144. It will be appreciated that as connector 134 continues to move towards the vertical retainer 146a of spacer 130, inner surface 117b of the panel member moves towards the flange 141 of the bushing member 138.

When connector 134 is tightened by pushing or rotating on the end of the rod 144 while slightly compressing the removable panel member 117 from the foamed plastic without laminating the panel surface with the plastic film, the bushing member 138 would, after the concrete wall has been formed and the panel removed, extend out of the concrete wall surface, thus changing the geometrical stability of the panel unit and resulting in a change of the geometry of the formed concrete wall.

As an aside, Applicant notes that in Applicant's embodiment shown in Figure 8, slight compression will take place only if the length of the shaft portion 137 of the connector 134 allows the flange portion of the connector to move after the initial abutment with the outer surface of the panel member. It is submitted that this configuration is not disclosed in any of the prior art cited by the Examiner.

In Applicant's invention, providing a foamed plastic with plastic film applied on the inner surface of a panel member on at least its inner surface will strengthen the panel member and thus when compressed provide both the required geometrical stability particularly at the inner surface of the panel member, and rigidity of the panel unit. By way of example with reference to paragraph [0065] of the application as filed, it is clear that panel 117, which may be made from foam polystyrene laminated with a plastic film, is stronger than panel 114 which is simply foam polystyrene.

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- paragraph [0085] of the original application reads:

"Additionally, surface 117b can be laminated with a plastic film such as polypropylene using known lamination techniques. To decrease the thickness of the removable expanded foamed polystyrene panel 117, both sides of the panel 117 can be laminated. Lamination of either or both of surface 117a and panel 117b, makes the panels stronger and allows the re-using of the panels in unit 112 or unit 312."

It should be noted that strengthening of the panel member is important in several respects. Strengthening is particularly important for a removable panel member because the wall formed by the contact with the removed panel will be exposed. While Long discloses a foam plastic panel with thermoplastic facer films on both surfaces, Applicant notes that the panel in Long is used only as an insulation layer and not for a panel having the inner surface adapted to prevent adhesion with the poured concrete such that the panel can be removed when the concrete has hardened. Nor does Long disclose the use of such a panel with facer films where the foam plastic panel is under compression.

In Applicant's system as illustrated for example in Figure 8, panel 117 is a removable one and thus it is desirable to have a minimal thickness to decrease the cost of the panel unit. In order to decrease the thickness of the removable foamed polystyrene panel, the panel can be laminated. Lamination of either surface makes the panels (already compressed) stronger and allows the reuse of the panel.

Turning now to the claims having regard to the foregoing comments, Applicant has amended claim 99 to more precisely distinguish from the prior art cited by the Examiner. Claim 99 now provides that the cap member is axially moved toward transverse tie member such that a panel member is compressed between said flange portion of the cap member and the flange portion of the bushing member to provide a rigid connection.

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Examiner states at page 5 of the Examiner's Report, that in Boeshart "The cap member 14 can be axially moved toward the transverse tie member 12, such that a panel member can be compressed between the flange portion 32 of the cap member 14 and flange portion 26 of said bushing member 16."

However, Applicant respectfully disagrees with Examiner's interpretation of Boeshart. It appears that the Examiner's interpretation may be correct only if the components in Boeshart are configured in a particular way. However, Boeshart does not positively disclose or teach compression or a configuration of components that would result in compression. In fact, column 3, lines 43-59 of Boeshart suggests that there is actually no compression contemplated; this portion reads "Because of the tight fit of retainer plate 14 in the aperture 38 of a form panel 34, retainer cups 16 are not always required". Thus, Boeshart does not positively disclose or teach or suggest compression because compression is not possible without retainer caps 16. Therefore, Boeshart actually teaches away from providing compression. Moreover, Boeshart in column 3, lines 35-38 discloses only contact with the panel not compression. Without compression, it is impossible to provide the panel unit with rigidity and geometrical stability. Boeshart's system is intended to retain the panel on the ends of the tie strap, column 3, lines 50-51, or to prevent outward movement of form panels without retainer cap 16 and uses friction preventing inward movement, column 3, lines 55-59. There is no recognition or suggestion that the panel in Boeshart should be compressed to provide enhanced features.

In view of the foregoing, it is respectfully submitted that claim 99, and claims 100 and 101 that are dependent on claim 99 are patentable over the prior art cited by the Examiner.

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New independent claim 110 is also presented for the Examiner's consideration. New claim 110 provides that at least the inner surface of the first panel member is laminated with a plastic film to strengthen said first panel member as well as having the inner surface laminated with a plastic film laminated having non-adhesive properties in relation to hardened concrete. Support for these features can be found for example at paragraphs [0084] and [0085] of the specification as originally filed. It is noted that Harkenrider does not disclose the use of a laminated plastic film to strengthen a foamed plastic panel.

Claim 110 also provides that the first panel member is held in compression by co-operation of the connector, the transverse tie member and the compression member (e.g. a rod member) to assist in providing a substantially rigid and geometrically stable panel unit. Support for this feature can be found for example at paragraphs [0069] and [0088] of the specification as originally filed. Also, for the reasons provided above in relation to claim 99, Applicant respectfully submits that this compression feature is not taught, disclosed or suggested by Boeshart either alone or in combination with Harkenrider and/or Long.

In overview, Applicant's system as defined by new claim 110 is configured such that the first panel member has its strength enhanced by the laminated plastic film and the first panel member is compressed, which in combination assist in providing a generally rigid and geometrically stable panel unit. Accordingly it is submitted that new claim 110 and the claims now dependent thereon, are patentable over the prior art cited by the Examiner.

New independent claim 111 contains similar limitations to those referenced above in relation to claim 110. Applicant respectfully submits that for the same reasons

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submitted above in relation to claim 110, claim 111 is also patentable over the prior art cited by the Examiner.

With respect to the following new dependent claims, support for features in such claims may be found for example at the following:

- Claims 113, 114 116, 117 – see original para. [0076] and associated Figures;
- Claims 118 and 119 – see original paras. [0068] and [0069] and associated Figures;
- Claims 124, 125 and 126 – see original para. [0072] and associated Figures.

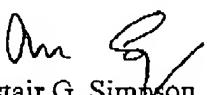
New claims 127 to 132 are also presented for consideration by the Examiner and believed to be fully supported by the application as originally filed.

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In view of the foregoing amendments and remarks, favorable reconsideration and allowance of this application is requested.

Respectfully submitted,


Alistair G. Simpson
Registration No. 37,040

SMART & BIGGAR
438 University Avenue
Suite 1500, Box 111
Toronto, Ontario
Canada M5G 2K8
Telephone: (416) 593-5514
Facsimile: (416) 591-1690

April 23, 2009
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